REMARKS

Claim Amendment

Claim 56, 57, 58, 74, 76, 78, 81, 83, 85, 90 and 91 have been amended for clarity.

Claim 68 is canceled and the subject matter of Claim 68 has been incorporated into Claim 67. Consequently, Claim 69 has been amended to depend from Claim 67.

New Claim 93 is supported at least by Figure 8, page 35, lines 17-19 and page 33, lines 7-9.

New Claims 94-104 recite that radiation is passed through the portion of said photomask loop directly onto the radiation curable material. The amendments are supported by at least Figures 8, 10, 11 and accompanying descriptions.

None of the above amendments add any new matter. The Examiner is requested to enter the amendment and reconsider the application.

The Response

I. 35 U.S.C 102(e) Rejection

Claims 53-54, 59-66 and 88 are rejected under 35 USC 102(e) as allegedly being anticipated by US Patent No. 6,018,383 (Dunn, *et al).* The rejection is traversed.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The process of Dunn *et al* is different from the present invention in many elements.

A. Claims 53-54 and 59-66

1. Coating a layer of a radiation curable material on a support web.

Dunn, *et al.* do not disclose using a radiation curable material, which is a material that becomes hardened (or cured) upon exposure to radiation. The hardening (or curing) typically involves polymerization of the radiation curable material. Dunn, *et al.* only disclose a "photosensitive material," which is any material that is sensitive to light. A photosensitive material is not inherently a radiation curable material. For example, a material that absorbs light and changes its color is a photosensitive material, but it is not necessary a radiation curable material.

2. Removing the unexposed radiation curable material.

In the present claims, it is essential to remove the unexposed radiation curable material such that a plurality of well-defined structures can be formed. Due to the characteristics of the radiation curable material, a portion of the radiation curable material is hardened through imagewise exposure. The unexposed material is not hardened (cured), thus it can be washed away and removed.

Dunn, *et al.* do not teach removing the unexposed portion. For the purpose of Dunn's patterning system, there is no reason to remove the unexposed material. Further, because Dunn *et al.* do not use a radiation curable material, it is difficult to separate the unexposed material from the exposed material and to remove the unexposed portions. Therefore, the Examiner's view that "inherently the unexposed portions are removed" is incorrect. To support the Examiner's inherency statement, the Examiner is requested to show that (a) there is a need for Dunn *et al* to remove the unexposed portions, (b) the unexposed portions can in fact be removed, and (c) the removal method is taught in Dunn *et al.*

3. Preparation of a plurality of well-defined structures.

The present claims are directed to the process of preparation of a plurality of well-defined structures. Dunn *et al.* disclose the process of projecting a master image onto a substrate. Dunn *et al.* do not teach preparing a plurality of well-defined structures.

B. Claim 88

Claim 88 is directed to a photolithographic process using web substrate comprises indium-tin oxide on polyethylene terephthalate, polyethylene naphthalate, or polycarbonate and said indium-tin oxide is coated with a radiation curable material. None of the above materials are disclosed in Dunn *et al.*

C. New Claims 94-104, direct radiation.

New Claims 94-104, radiation is passed through a portion of said photomask loop **directly** onto the radiation curable material. Dunn *et al.* do not teach direct radiation onto the radiation curable material. Dunn *et al.* disclose an **indirect** projection of a master image onto a substrate. In fact, Dunn *et al* specifically mentions that a 1:1 projection system, which is stationary and situated above the mask and substrate, is needed (see column 3, lines 61-62). The "projection system" of Dunn *et al.* includes a fold mirror **25**, a reversing unit **27** and projection lens **26**. Dunn et al does not disclose that the exposure may be direct without the projection system.

For the reasons stated above, Claims 53-54, 59-66, 88 and 94-104 are not anticipated by Dunn *et al.*

II. 35 U.S.C 103(a) Rejection

Claims 55-58 and 67-92 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over US Patent No. 6,018,383 (Dunn *et al.*) in view of U.S. Patent Application Publication No. 2002/0029969 (Yager *et al*). The rejection is traversed.

A. Claims 55-58 and 67-71

Claim 68 is canceled and the subject matter of Claim 68 has been incorporated into Claim 67.

Claims 55-58, 67 and 69-71 are directed to a process for the preparation of a plurality of microcups. As discussed above, Dunn *et al.* do not teach or suggest (a) coating a layer of a radiation curable material on a support web, (b) removing the

unexposed radiation curable material, and (c) preparation of a plurality of microcups. The addition of Yager *et al.* does not cure the deficiency of Dunn *et al.*

Yager *et al* do not disclose a process for the preparation of a plurality of microcups. At Paragraph [0038], Yager *et al* discuss the formation of separation channels for the charged biomolecules by casting a substrate in a mold. The mold, according to paragraphs [0039]-[0041], is prepared by coating pattern receiving layers on a tungsten substrate, exposure and development of a resist, and followed by transferring a pattern formed down through the layers coated on the substrate using successive treatments with specific chemical etchants, culminating in the etching of the substrate itself. The process bears no resemblance to the process of the present invention.

Therefore, the combination of Dunn *et al.* and Yager *et al.* does not produce the claimed invention.

B. Claims 72-87

Claims 72-87 are directed to a process of preparing a multi-color display. Dunn *et al* or Yager *et al* does not even remotely disclose a multi-color display.

Neither Dunn *et al* nor Yager *et al* has taught or suggested a process of making a multi-color display, such as imagewise exposure of a radiation curable material, removing the exposed radiation curable material so as to re-open a pre-selected subset of microcups, and **filling said re-opened pre-selected subset of microcups with a electrophoretic display pigment/solvent composition or a liquid crystal display composition**.

C. Claims 88-92

Claims 88-92 are directed to a photolithographic process using web substrate comprises indium-tin oxide on polyethylene terephthalate, polyethylene naphthalate or polycarbonate and said ITO is coated with a radiation curable material. None of the above materials are disclosed in Dunn *et al* or Yager *et al.*

For the reasons stated above, the Examiner is requested to withdraw the 103(a) rejection of Claims 55-58, 67 and 69-92.

CONCLUSION

Applicants believe that the application is now in good and proper condition for allowance. Early notification of allowance is earnestly solicited.

Respectfully submitted,

Date: April 26, 2004

Albert P. Halluin (Reg. No. 25,227)
Viola T. Kung (Reg. No. 41,131)

HOWREY SIMON ARNOLD & WHITE, LLP
301 Ravenswood Avenue
Box 34
Menlo Park, CA 94025
Ph. (650) 463-8181